

What is claimed is:

1. A process for removing an aqueous slurry suspension, comprising a blast medium and coating substance residues, produced when cleaning surfaces having a corrosion protection coating on the surfaces which comprises:
 - a) suctioning the aqueous slurry suspension comprising a blast medium and coating substance residues into a receiving tank by an air feed;
 - b) diluting the suspension with water under vacuum in the receiving tank;
 - c) feeding the diluted suspension by means of a pump into a settling tank,
 - c) separating a solids materials portion of the suspension from the water by sedimentation, and
 - e) recycling the separated water,wherein the suctioning of the aqueous slurry suspension into the receiving tank is conducted with a vacuum, wherein a pressure ratio of outside pressure to receiving tank pressure is 1:0.52 or more, whereby the aqueous suspension is diluted to a solid materials proportion of a maximum of about 10% by volume, and wherein the diluted suspension is fed continuously to the settling tank and overcomes a height differential of at least about 5 meters.
2. The process according to claim 1 in which the pump utilized in step c) is a centrifugal pump or diaphragm pump.
3. Process according to claim 1 in which the suspension in step b) is diluted with water to a solid materials proportion of about 5% by volume.
4. The process according to claim 2 in which the suspension in step b) is diluted with water to a solid materials proportion of about 5% by volume.

5. The process according to claim 1 in which the continuous feeding in step c) overcomes a height differential of about 30 meters or more.
- 5 6. The process according to claims 2 in which the continuous feeding in step c) overcomes a height differential of about 30 meters or more.
7. The process according to claims 3 in which the continuous feeding in step c) overcomes a height differential of about 30 meters or more.
- 10 8. The process according to claim 1 in which the pumping of step c) is accomplished in a multistage manner.
9. The process according to claim 2 in which the pumping of step c) is
- 15 accomplished in a multistage manner.
10. The process according to claim 3 in which the pumping of step c) is accomplished in a multistage manner.
- 20 11. The process according to claim 4 in which the pumping of step c) is accomplished in a multistage manner.
12. The process according to claim 5 in which the pumping of step c) is accomplished in a multistage manner.
- 25 13. The process according to claim 6 in which the pumping of step c) is accomplished in a multistage manner.

14. The process according to claim 7 in which the pumping of step c) is accomplished in a multistage manner.

5 15. Process according to claim 1 in which the suspension in step b) is diluted with water to a solid materials proportion of from about 3% to about 10 % by volume.

16. Process according to claim 1 in which the receiving tank has a vacuum of at least 0.5 bar with respect to atmospheric pressure.

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17. Process according to claim 1 in which the suspension in step a) prior to dilution has a solid materials proportion of from about 10% to about 40 % by volume.

15 18. A process for removing an aqueous slurry suspension, comprising a blast medium and coating substance residues, produced when cleaning surfaces having a corrosion protection coating on the surfaces which comprises:

20 a) suctioning the aqueous slurry suspension comprising a blast medium and coating substance residues into a receiving tank by an air feed, with a diaphragm pump of about 6 bar and a hose of about 40 meters;

b) diluting the suspension with water under vacuum in the receiving tank;

c) feeding the diluted suspension by means of a pump into a settling tank,

c) separating a solids materials portion of the suspension from the water by sedimentation, and

25 e) recycling the separated water,

wherein the suctioning of the aqueous slurry suspension into the receiving tank is conducted with a vacuum, wherein a pressure ratio of outside pressure to receiving tank pressure is 1:0.52 or more, whereby the aqueous suspension is

diluted to a solid materials proportion of a maximum of about 10% by volume, and wherein the diluted suspension is fed continuously to the settling tank overcomes a height differential of about 30 meters.

- 5 19. An apparatus for removing an aqueous slurry suspension, comprising a blast medium and coating substance residues, produced when cleaning surfaces having a corrosion protection coating on the surfaces which comprises:
- 10 a) a device for suctioning the aqueous slurry suspension comprising a blast medium and coating substance residues into a receiving tank by an air feed;
- b) a device for diluting the suspension with water;
- c) a device for feeding the diluted suspension by means of a pump into a settling tank,
- 15 c) a device for separating a solids materials portion of the suspension from the water by sedimentation, and
- e) a device for recycling the separated water,
- wherein the device for suctioning of the aqueous slurry suspension into the receiving tank is comprises a vacuum generator which generates a pressure ratio of outside pressure to receiving tank pressure of 1:0.52 or
- 20 more, and wherein the aqueous suspension is diluted to a solid materials proportion of a maximum of about 10% by volume, and wherein the diluted suspension is capable of being fed continuously to the settling tank and capable of overcoming a height differential of at least about 5 meters.
- 25 20. The apparatus according to claim 19 wherein the pump is a centrifugal pump or diaphragm pump.

21. The apparatus according to claim 19 wherein the pump comprises a plurality of pumping stages.